

REMARKS

Claims 1-4 have been examined. Claims 1-3 have been rejected under 35 U.S.C. § 103(a) and claim 4 has been rejected under 35 U.S.C. § 112, first paragraph.

Preliminary Matters

The Examiner has objected to the specification due to an informality. In particular, the Examiner maintains that the term “circumferences” on page 3, line 7, is indefinite. Applicant submits that the term “circumferences” is the result of a translation error. Therefore, Applicant has amended the specification, and respectfully requests the Examiner to reconsider and withdraw the objection.

Rejections under 35 U.S.C. § 112, first paragraph

The Examiner has rejected claim 4 under 35 U.S.C. § 112, first paragraph, for non-enablement of the claimed flux. In particular, the Examiner maintains that the specification is enabled for a flux made of a mixture of NaCl, KCl and Na₃AlF₆, but is not enabled for a high temperature evaporative flux. In other words, the Examiner’s position with respect to claim 4 is that one of ordinary skill in the art would not be able to perform the claimed invention because they would not know what a “high temperature evaporative flux” is (i.e. to be used as a flux that will be “baked” in order to recover an upper layer of the dross). However, Applicant submits that the mixture of NaCl, KCl and Na₃AlF₆ is an example of a high-temperature evaporative flux.

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Therefore, Applicant submits that claim 4 is fully enabled, and respectfully requests the Examiner to reconsider and withdraw the rejection. Further, since claim 4 is dependent upon claim 1, Applicant submits that such claim is patentable at least by virtue of its dependency for the reasons set forth below.

In addition, in view of the above, Applicant has canceled claim 3, without prejudice or disclaimer, where claim 3 is directed to dissolving a flux in a solvent (i.e. a water soluble flux).

Rejections under 35 U.S.C. § 103(a)

Claims 1-3 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,080,715 to Provencher et al. (“Provencher”).

A. Claim 1

Applicant submits that claim 1 is patentable over the cited reference. For example, the method of claim 1 recites that after a flux is thrown into a metal-inorganic particle melt and contacted with the melt sufficiently, the melt is left at rest to separate the melt into an upper layer of the inorganic particles and a lower layer of the metal.

The Examiner maintains that Provencher discloses the claimed method. However, the Examiner has not shown where Provencher teaches or suggests that a melt is left at rest to separate the melt into an upper and lower layer. Applicant submits that the reference fails to teach or suggest such a step. For example, in the method of Provencher, a salt flux is added to a melt while the melt is mixed with an impeller at a specified rotation speed (col. 4, lines 30-35).

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The mixing at the specified rotation speed is continued for about 4 minutes (col. 4, lines 30-49).

At the end of the 4 minutes, the position of the impeller, as well as the rotation speed of the impeller is changed, and mixing is continued for another 7 minutes (col. 4, lines 47-53). The reference discloses that after the 7 minutes, the reinforcing particles become completely dewetted, and form a dry powder layer on the surface of the melt (col. 4, lines 53-56). The powder is then removed from the metal melt (col. 4, lines 56-57). Therefore, it appears that the once the salt flux is added to the melt, the melt is continually mixed until the reinforcing particles and the metal are separated. In other words, the reference fails to teach or disclose that once the salt flux is added to the melt, the melt is left to rest in order to separate the particles.

Accordingly, Applicant submits that the method of claim 1 is patentable over the cited reference, and respectfully requests the Examiner to reconsider and withdraw the rejection.

B. Claims 2 and 3

Since claim 2 is dependent upon claim 1, Applicant submits that such claim is patentable at least by virtue of its dependency. Also, since claim 3 has been canceled, without prejudice or disclaimer, Applicant submits that the rejection of such claim is now moot.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

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Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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